

**PLANT PARASITIC NEMATODES ASSOCIATED
WITH COTTON PRODUCTION
IN THE OUACHITA DELTA
AND MACON RIDGE AREAS OF LOUISIANA**

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Abstract

Four parishes of the Ouachita Delta and Macon Ridge areas of Louisiana were surveyed for the presence of plant parasitic nematodes associated with cotton production. In September and October of 1997 soil samples were collected from 10780 acres of cotton fields representing 3.7% of the acreage in the four parishes area. Each producers field was sampled in 20 acre sections with a maximum of 20 samples were taken from each. Nematodes were separated from a 150-cm³ of soil from each sample by gravity screening and centrifugation. Plant parasitic nematodes were identified to genus and enumerated using a stereo microscope.

Ten genera of plant parasitic nematodes were identified. The reniform nematode (*Rotylenchulus reniformis*) was identified in 68% of the samples with an average population of 12,964 juveniles and adults per 500cm³ of soil (Table 1). Root-knot nematodes (*Meloidogyne spp.*) were identified in 29% of the samples with an average population of 1,053 juveniles per 500cm³ of soil. The lesion nematode (*Pratylenchus spp.*) and lance nematode (*Hoplolaimus spp.*) were identified in 8.2 and 2.4% of the fields, respectively, with average populations of 282 and 703 juveniles and adults per 500cm³. The plant parasitic nematodes, *R. reniformis*, *Meloidogyne spp.*, and *Hoplolaimus spp.* were found in 88% of the field samples which represented 3.7% of the total acreage. Thus this survey suggests that the Ouachita Delta and Macon Ridge cotton production areas do contain plant parasitic nematodes with the potential to cause damage to cotton.